

180 may include a multimedia play module **181** for playing multimedia. The multimedia play module **181** may be constructed in hardware within the controller **180** or constructed in software separately from the controller **180**.

[0055] The power supply unit **190** is supplied with external power source or internal power source and supplies power source necessary for the operation of the each constituent element under the control of the controller **180**.

[0056] From a viewpoint of the constituent elements according to their functions, the mobile terminal pertinent to the present invention has been described so far. From a viewpoint of the constituent elements according to their external shapes, the mobile terminal pertinent to the present invention will be hereinafter described with reference to FIGS. 2, 3 and 4. Hereinafter, a bar type mobile terminal equipped with a full touch screen, of several types of mobile terminals such as a folding type, a bar type, a swing type, and a sliding type, is described as an example, for convenience of description. However, it should be understood that the present invention is not limited to the bar type mobile terminal, but instead may be applied to all types of mobile terminals, including the above types.

[0057] FIG. 2 illustrates a perspective view of the mobile terminal shown in FIG. 1. FIG. 2(a) illustrates a front perspective view of the mobile terminal shown in FIG. 1, FIG. 2(b) illustrates a rear perspective view of the mobile terminal shown in FIG. 1. FIG. 2(c) illustrates a perspective view of the mobile terminal which is folded or bent.

[0058] Referring to FIG. 2, a casing constituting an external appearance of the mobile terminal **100** of the present invention is comprised of a front casing **100A-1** and a rear casing **100A-2**. A variety of electronic components are embedded in space formed by the front casing **100A-1** and the rear casing **100A-2**. At least one middle casing may be further disposed between the front casing **100A-1** and the rear casing **100A-2**. The casings may be formed by injecting synthetic resin or may be formed from metal materials such as stainless steel (STS) or titanium (Ti).

[0059] A first sound output module **153a**, a first user manipulating portion **130a**, a second user manipulating portion **130b**, a third user manipulating portion **130c**, and a microphone **122** may be disposed in the main body, more specifically, the front casing **100A-1**.

[0060] The flexible display **151** could be extended from a space which is between a front casing **100A-1** and a rear casing **100A-2**.

[0061] A packing unit **151e** which is disposed on the side of the flexible display **151** may move to from side to side. If the packing unit **151e** moves to right, the flexible display which has been rolled in space formed by the front casing **100A-1** and the rear casing **100A-2** is stretched.

[0062] The stretched flexible display **151** has display region.

[0063] If the flexible display **151** is stretched, the controller **180** calculates a size of the display region corresponding to a size of the stretched flexible display. The controller **180** changes object displayed on the display region according to the extent of the stretched flexible display **151**.

[0064] The flexible display **151** may be configured in such a manner that a touch pad is overlapped with the flexible display **151** in a layered structure and therefore the flexible display **151** operates as a touch screen, thereby enabling the input of information by a user's touch.

[0065] The flexible display **151** may be rolled in space which is formed between the front casing **100A-1** and the rear casing **100A-2**.

[0066] The flexible display **151** includes a liquid crystal display (LCD), an organic light-emitting diode (OLED) and the like, which visually display information.

[0067] The first sound output module **153a** may be implemented in the form of a receiver or speaker. The microphone **122** may be implemented in such a way as to appropriately receive a user's voice, other sound, etc.

[0068] The first to third user manipulating portions **130a**, **130b**, and **130c** may be collectively called the user manipulating portion **130**. The user manipulating portion **130** may adopt any kind of a method as long as it supports a tactile manner.

[0069] For example, the user manipulating portion **130** may be implemented using a dome switch or a touch pad, which is able to receive commands or information by push or touch manipulation of a user, or may be implemented using a wheel or jog method for rotating a key, a method employing Joystick or the like. In terms of the function, the first user manipulating portion **130a** may be adapted to input commands such as start, end, and call. The second user manipulating portion **130b** may be adapted to select an operating mode and so on. The third user manipulating portion **130c** may operate as a hot key for activating special functions within the mobile terminal **100**.

[0070] If user's finger approaches the flexible display **151**, a proximity sensor **141** detects the user's finger and output a proximity signal. The proximity sensor **141** may output different proximity signals according to the distance to the user's finger.

[0071] Assuming that a distance in which the proximity sensor approaches a detection object and outputs a proximity signal is a detection distance. If proximity signals output from a plurality of the proximity sensors having different detection distances are compared with each other, it can be known how near the object approaches the proximity sensors.

[0072] If a plurality of proximity sensors having different detection areas is disposed and which proximity signal is output from which one of the proximity sensors is understood, it can be known that a detection object approaches which area of the display unit **151**, whether a detection object moves close to the display unit **151**, and so on. Accordingly, the controller **180** can perform a variety of operation controls according to a degree in which a user's finger, etc. approaches the display unit **151**, a proximity location thereof, and so on.

[0073] If the user tilts or shakes the mobile terminal **100**, the gyro sensor **142** may sense that the mobile terminal **100** has been moved. Thereafter, the gyro sensor **142** may generate a signal corresponding to the movement of the mobile terminal **100** and may output the signal to the control unit **180**. Then, the control unit **180** may obtain various information regarding the movement of the mobile terminal **100** such as the direction, angle, velocity, and magnitude of the movement of the mobile terminal **100** and a current location of the mobile terminal from the signal generated by the gyro sensor **142**.

[0074] The control unit **180** may keep track of the movement of the mobile terminal **100** with the information obtained from the signal generated by the gyro sensor **142**. The type of information that can be obtained from the gyro sensor **142** may vary according to the type of the gyro sensor **142**. Thus, the type of gyro sensor **142** that can be used in the